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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/900,713	07/05/2001	Yonglin Huang	NFCS-00-014	3966

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FISH & RICHARDSON P.C.
45 ROCKEFELLER PLAZA, SUITE 2800
NEW YORK, NY 10111

EXAMINER

SHAFFER, RICKY D

ART UNIT PAPER NUMBER

2872

DATE MAILED: 06/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/900,713

Applicant(s)

HUANG ET AL.

Examiner

Ricky D. Shafer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 July 2001 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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1. During a telephone conversation conducted on 3/19/03, Mr. Arthur Ortega requested an extension of time for ONE MONTH and authorized the Commissioner to charge Deposit Account No. 06-1050 the required fee of \$ 110.00 for this extension and authorized the examiner to make an examiner's amendment to place the application in condition for allowance.

However, after further review of the prior art of record, such agreed upon amendments, still would not avoid some of the prior art of record. Accordingly, the examiner informed applicant, that the examiner will enter the after-final amendment filed on 2/24/03.

Rejections based on the prior art of record follows.

2. Claims 1-5 and 7-48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, lines 6-7, claim 9, lines 7-8, claim 22, lines 7-8 and claim 35, line 8, the use of the language "and between the first polarizer and" is nonsensical and/or misdescriptive. The examiner suggests that the above mentioned language be changed to read --after--.

In claims 3, 12 and 25, line 2, the symbols "+/-45°" is vague and indefinite. The language of claim must be expressed in the alternative only. The examiner suggests that the above mentioned language be changed to read --+45° or -45°--.

In claim 9, line 15 and claim 22, line 19, the language "said optic" lacks proper antecedent basis. The examiner suggests that the above mentioned language be changed to read --an optic--.

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Claim 30 is vague, indefinite and/or confusing. It is unclear to the examiner how the above mentioned language is considered to further limit the subject matter of claim 22, lines 13 to 15.

The examiner suggests canceling the claim.

In claim 41, line 8, the use of the language "between the means for separating light and" is nonsensical and/or misdescriptive. The examiner suggests that the above mentioned language be changed to read --after--.

In claim 41, line 14, the language "said optical plane" lacks proper antecedent basis. The examiner suggests inserting the language --and includes an optical plane-- after "refracting".

In claim 42, line 3, "said second polarizer" lacks proper antecedent basis. The examiner suggests that the above mentioned language be changed to read --said optical isolator--.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 41-46 and 48 are rejected under 35 U.S.C. 102(b) as being anticipated by Shirai et al ('853).

To the extent the claims are definite, Shirai et al discloses an optical isolator comprising means (5) for separating light traveling in a forward direction into at least one o-ray and at least one e-ray, means (6) for rotating the polarization of the at least one o-ray and the at least one e-

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ray, means (7) for refracting the at least one o-ray and the at least one e-ray and means for passing the at least one o-ray and the at least one e-ray through a correction element (8), wherein the input face of the correction element is parallel to the input face of the means for refracting and the optical plane of the correction element is perpendicular to the optic axis of the means for refracting (see column 4, lines 43-26), note Fig. 7 along with the associated description thereof, wherein the correction element inherently compensates for differential group delay and walk-off introduced by the means for separating and the means for refracting as well as having a walk off distance between the o-ray and the e-ray being approximately equal to the length of the correction element multiplied by the tangent of an angle (β) due to the fact the rays are synthesized at the output to obtain a single laser beam.

5. Claims 9, 11, 13, 14, 20, 21, 35, 37, 41, 43, 47 and 48 are rejected under 35

U.S.C. 102(b) as being anticipated by Pan et al ('692).

To the extent the claims are definite, Pan et al discloses an optical isolator comprising a first polarizer (12) having a wedge shape for separating light traveling in a forward direction into at least one o-ray and at least one e-ray, a polarization rotator (13) for rotating the polarization of the at least one o-ray and the at least one e-ray, a second polarizer (14) having a wedge shape for refracting the at least one o-ray and the at least one e-ray and a correction element (20) for passing the at least one o-ray and the at least one e-ray, wherein the input face of the correction element is parallel to the input face of the means for refracting and the optical plane of the correction element is perpendicular to the optic axis of the means for refracting (see column 6,

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lines 16-25), note Fig. 5 along with the associated description of figures 2A to 4 and 5B to 7B, wherein the correction element inherently compensates for differential group delay and walk-off introduced by the first and second polarizers in order for the rays to be combined to a point on the end of output fiber (18).

6. Claims 1-3, 5, 7, 9, 11, 12, 20, 21, 35, 37, 41, 43, 47 and 48 are rejected under 35 U.S.C. 102(b) as being anticipated by Masuda et al ('431).

To the extent the claims are definite, Masuda et al discloses an optical isolator comprising a first polarizer (36) having a wedge shape for separating light traveling in a forward direction into at least one o-ray and at least one e-ray, a polarization rotator (34) for rotating the polarization of the at least one o-ray and the at least one e-ray, a second polarizer (38) having a wedge shape for refracting the at least one o-ray and the at least one e-ray and a correction element (40) for passing the at least one o-ray and the at least one e-ray, wherein the input face of the correction element is parallel to the input face of the means for refracting and the optical plane of the correction element is perpendicular to the optic axis of the means for refracting (see column 4, lines 29-33), note figures 1-3 along with the associated description thereof, wherein the correction element inherently compensates for differential group delay and walk-off introduced by the first and second polarizers in order for the rays to be combined to a point on the end of output fiber (24).

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7. Claim 22 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

8. Claims 4, 8, 10, 15-19, 23-34, 36 and 38-40 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

9. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the first polarizer having an optic axis of plus or minus 45 degrees must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The examiner suggests that polarizer 206, shown in Fig. 2, be amended to properly illustrate $\gamma 1$ having an optic axis angle of 45 degrees

10. Claims 5, 9, 10, 15, 35 and 37 are objected to because of the following informalities:

In claim 5, line 3, the language "the angle" should be changed to read --angle--.

In claim 9, line 15 and claim 22, line 19, the language --is-- should be inserted before "perpendicular".

In claim 10, line 1, the language "lease" should be changed to read --least--.

In claim 10, line 4, the language --at least one-- should be inserted before "e-ray".

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In claim 15, line 2, the language "lest" should be changed to read --least--.

In claim 15, line 3, the language "pats" should be changed to read --paths--.

In claim 35, line 20 and claim 41, line 12, the language --which-- should be inserted after "length".

In claims 37 and 43, line 2, the language "the first" should be changed to read --first--.

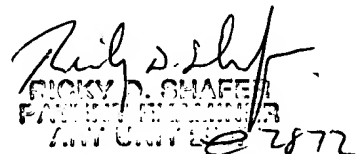
Appropriate correction is required.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication should be directed to R.D. Shafer at telephone number (703) 308-4813.

RDS // March 26, 2003


RICHARD D. SHAFER
PATENT EXAMINER
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